APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/506,717	02/18/00	HELSON	H 103544.127

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	EXAMINER
	HARTTER, A

ART UNIT	PAPER NUMBER
1631	4

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DATE MAILED:

06/15/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

	Application No.	Applicant(s)
Office Action Summary	09/506,717	HELSON, HAROLD E
	Examiner	Art Unit
	Amy Hartter	1631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _18 February 2000_ .

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-3_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-3_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

       1. ☐ Certified copies of the priority documents have been received.

       2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

       3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)
16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

18) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other: .

Detailed Action

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102

that form the basis for the rejections under this section made in this Office Action:

> (b) the invention was patented or described in a printed publication in this or a foreign country or
>
> in public use or on sale in this country, more than one year prior to the date of application for
>
> patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102 (b) as being clearly anticipated by the

reference of *Organic Chemistry,* Third Edition, by Robert Thorton Morrison and

Robert Neilson Boyd, copyright 1973 by Allyn and Bacon, Inc.

Claim 1 of the invention is stated as follows:

> "A method for use in deriving fixed bond information, comprising:
>
> Analyzing a delocalized representation of a chemical structure;
>
> Determining, based on a table of electronic state and valence distributions,
>
> Electronic and bonding characteristics for at least one atom in the chemical structure
>
> And producing, based the electronic and bonding characteristics, a fixed bond
>
> representation of the chemical structure."

This Claim is clearly evidenced in the statements in *Organic Chemistry.*

Organic Chemistry states that the bonds that result between atom are due to the

sharing of electrons. The source displays that these bonds may become fixed and

that the force that retains the integrity of the bond is the electrostatic attraction

between the two atoms and their respective electrons. The Applicant's claim also

embodies a similar construct in the statement that the method is used for deriving a fixed bond representation based on "a table of electronic state and valence distribution" as well as the "electronic and bonding characteristics" that is derived from "a fixed bond representation of the chemical structure". The Applicant's claim is merely stating the method that has been used for some time to derive the locality of electrons in a bonding architecture and used this information to deploy a representation of the chemical structure. Thus the Applicant's invention represented in Claim 1 has been anticipated by the prior art.

The following is quotation of 35 U.S.C. § 103 (a), which forms the basis for all obviousness rejections, set forth in this Office Action:

"A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negarived by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person."

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over the reference of Facci et al. (U.S. Patent 5,461,580) in view of the *Organic Chemistry* reference.

This section is applicable to the explicit computer limitation of Claims 2
and 3 of the instant Application in combination with the aforementioned *Organic
Chemistry* reference. Claim 1 is also rejected herein because it is generic
regarding species such as the computer practice of the steps therein. The
applicable 103 computer reference is that of United States patent number
5,461,580. The patent addresses a very similar invention to the Applicant's. The
abstract of the patent is as follows:

A computer–aided chemical illustration system is disclosed. Techniques provided
include: 1) efficient drawing of bonds; 2) drawing different bond types during a single mode; 3)
determining bisect angles for bonds; 4) labeling atoms on the alignment of atom labels; 5)
automatic alignment of atom labels; 6) custom alignment of atom labels; 7) changing the style,
orientation of an object while it is being drawn; 8) detection of ring structures; and 9) shifting
bonds around in a ring.

The statements made in the abstract especially those concerning the
drawing of bonds and the drawing of bond types in a single mode are drawn to
claims 2 and 3. These statements related to the claims in the fact that they
discuss a form of fixed bonds and a system that is used to derive that
information. The patent also clearly states that the system that will be used is of
a "computer-aided nature" which speaks to the essence of Claim 3.

When the statements from patent 5,461,580 are combined with the
statements that were discussed before associated with the *Organic Chemistry*
reference, it becomes obvious to one skilled in the art that these two concepts
can and would be combined. The motivation for these actions lies in the fact that

computers are used widely to increase the ease and accuracy of many manual

tasks and is done so on a routine basis. Thus the prior art with the reference to

the electron structure an d the interactions between atoms that was made in

Chemistry and the reference to the computer modeling in Patent 5,461,580

precedes the Applicant's invention.

Any questions concerning this communication or earlier communications

from the examiner should be directed to Amy Hartter, whose telephone number

is (703) 308-1696. The examiner can normally be reached on Monday through

Friday from 8:00 to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Michael Woodward can be reached at (703) 308-4028.

Any questions of a general nature concerning the status of this application

or proceedings should be directed to the Patent Analyst, Kim Davis, whose

telephone number is (703) 305-3015, or to the Technical Center Receptionist

whose telephone number is (703) 308-0196. The fax numbers for the

organization where this application or proceeding is assigned are (703) 308-4242

or (703) 305-3014.

Amy Hartter

ARDIN H. MARSCHEL
PRIMARY EXAMINER